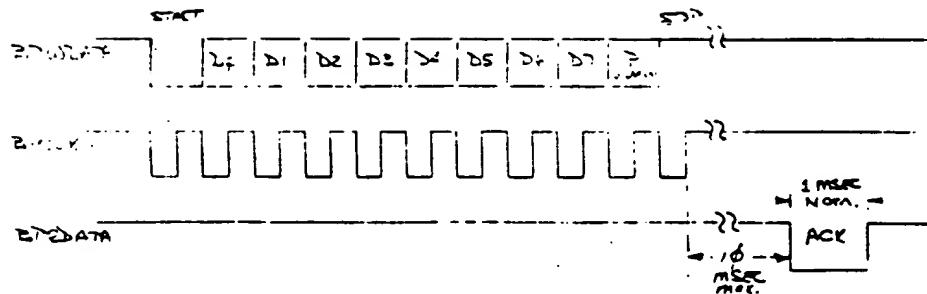


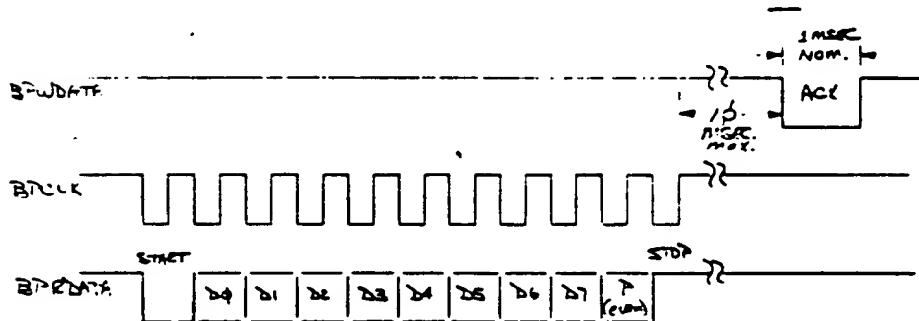
APPENDIX B

STEVEN E. KOENICK

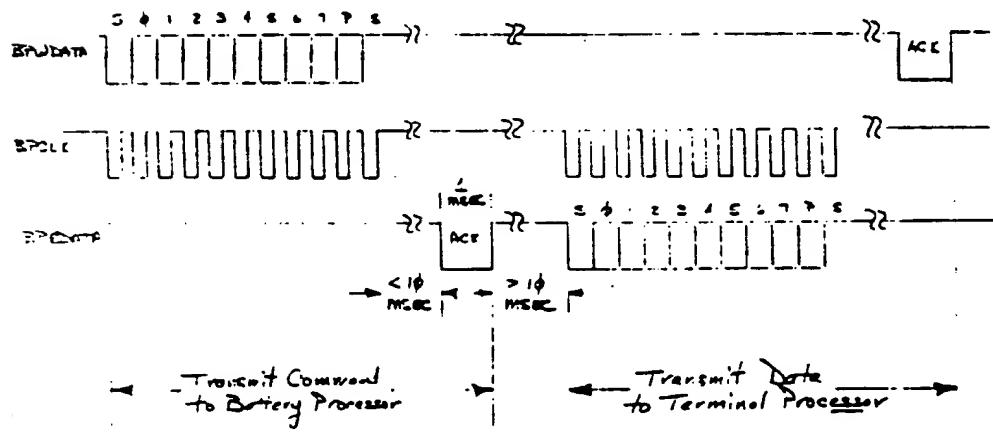
APPLICATION FOR PATENT "BATTERY
CONDITIONING SYSTEM HAVING
COMMUNICATION WITH BATTERY
PARAMETER MEASUREMENT MEANS IN
CONJUNCTION WITH BATTERY
CONDITIONING" ATTY. DOCKET 5717-Y



Terminal to Battery Processor Communication

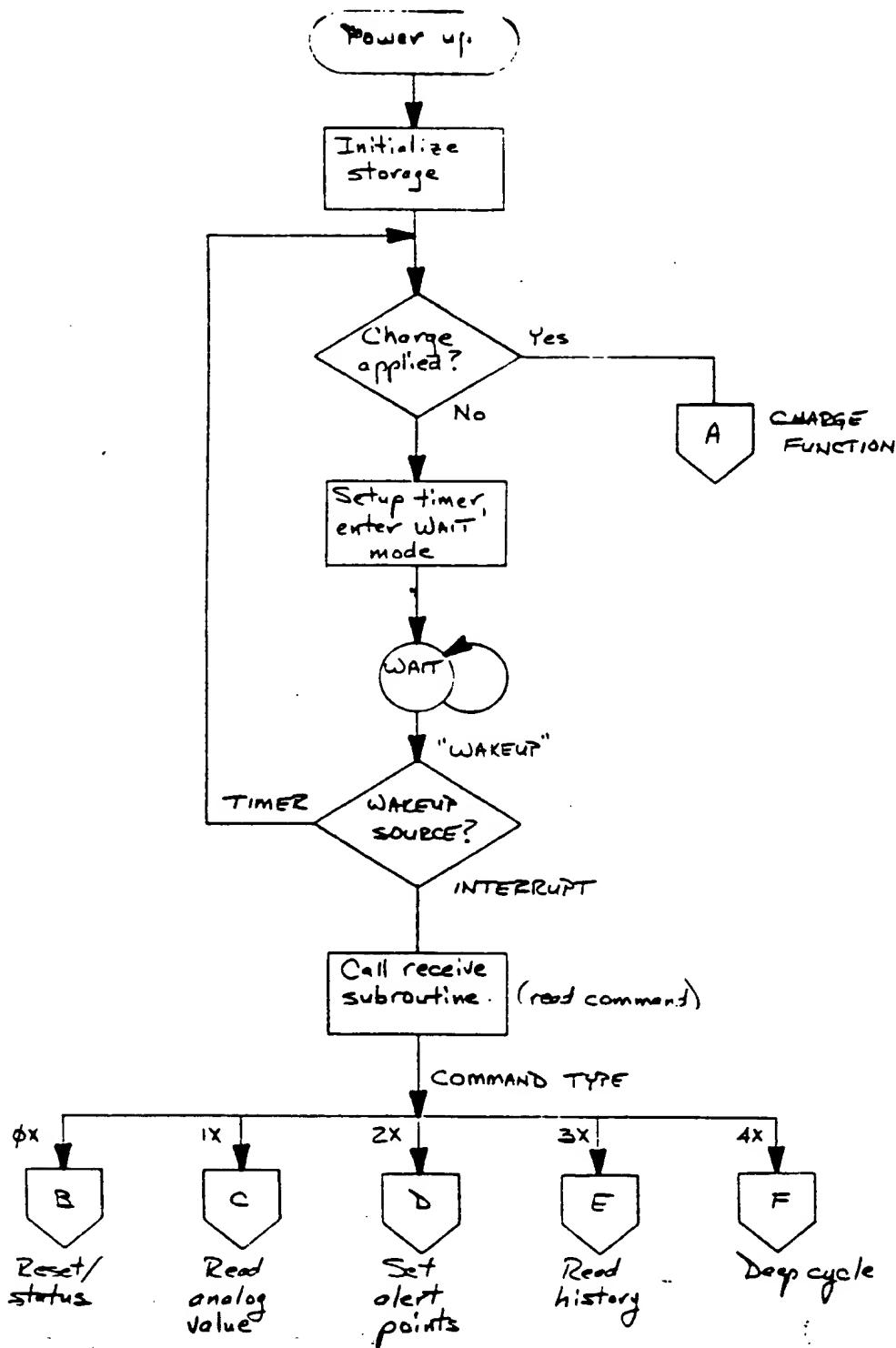


Battery Processor to Terminal Communication

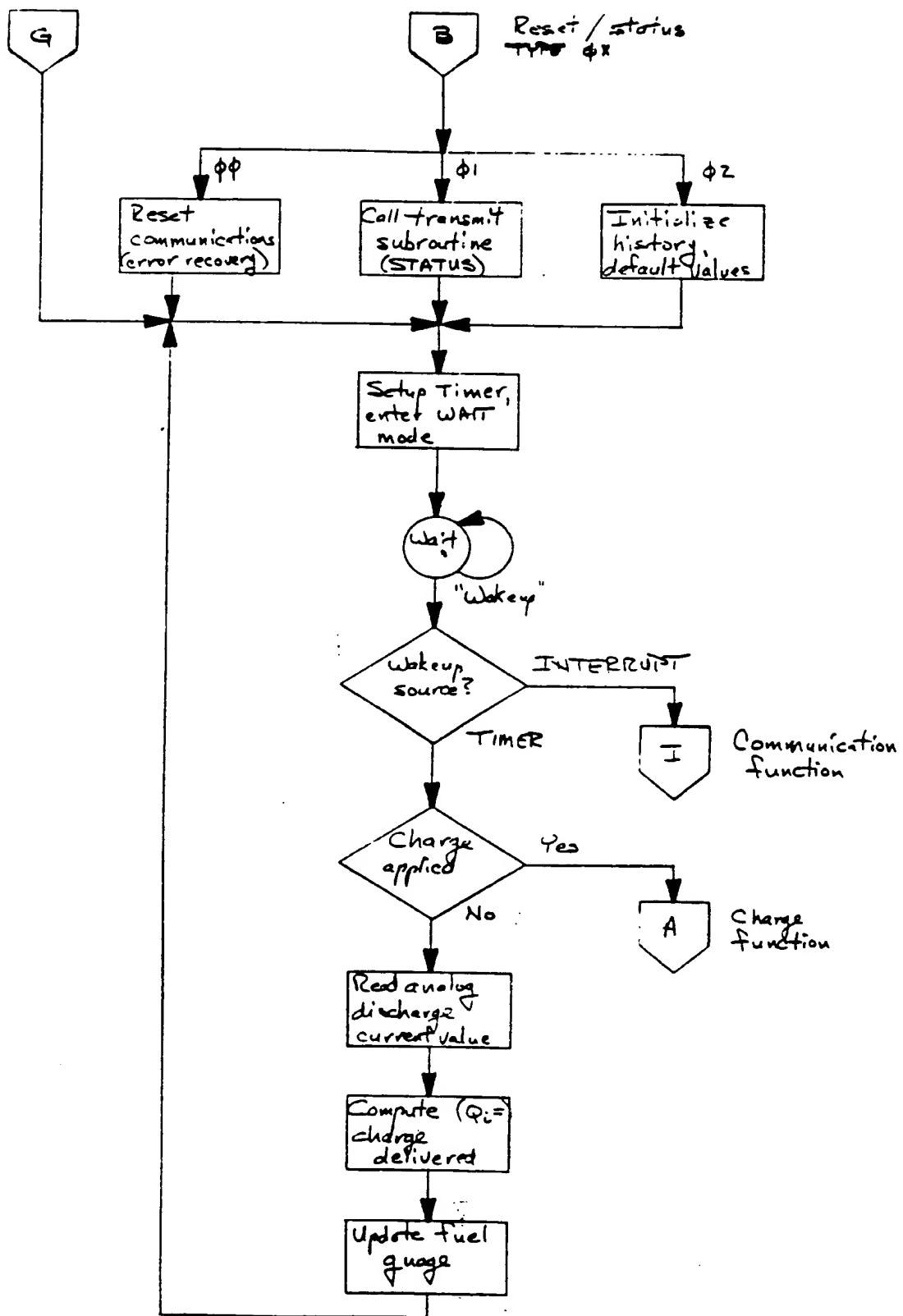


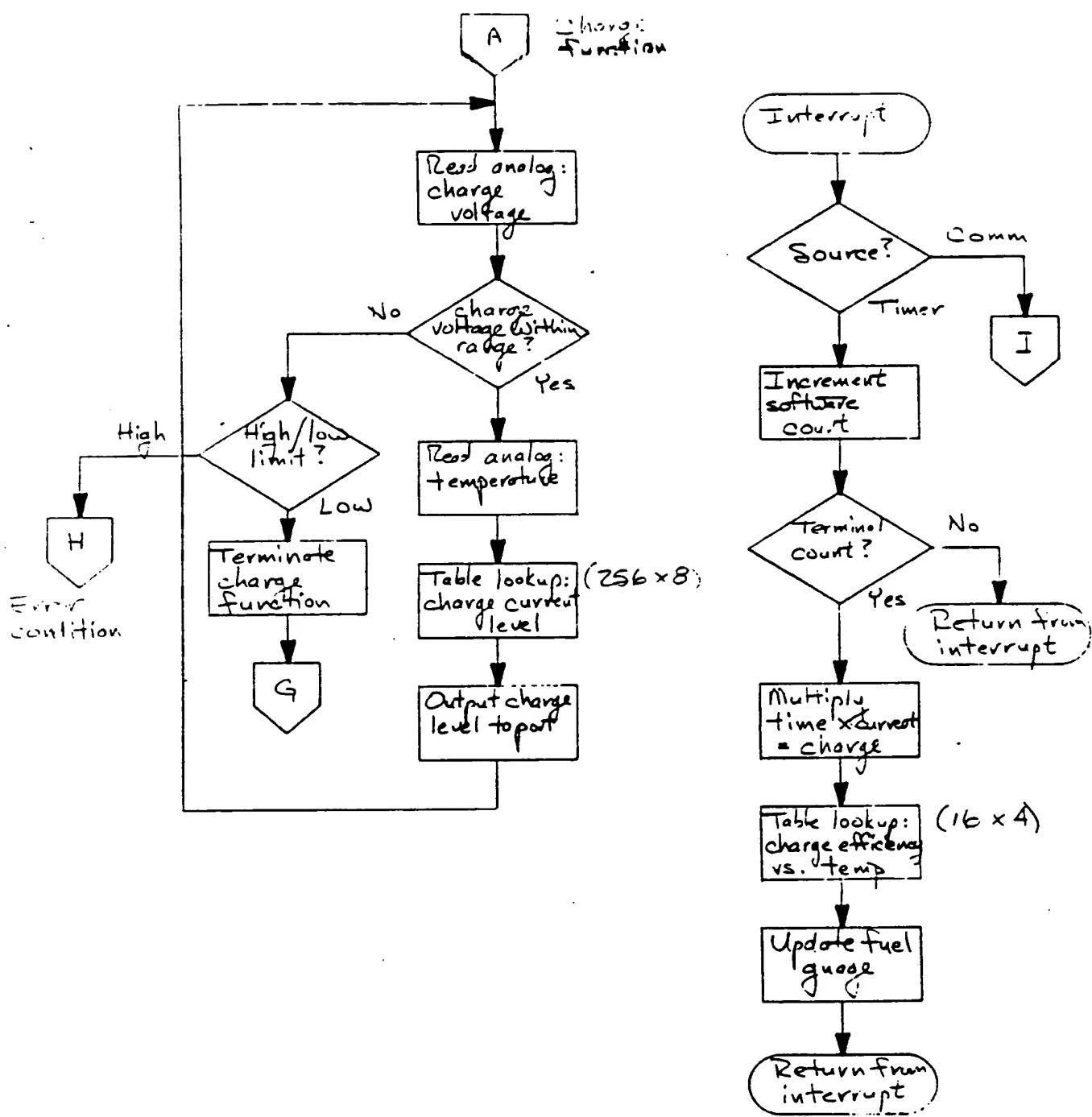
Command / Response Communication Protocol

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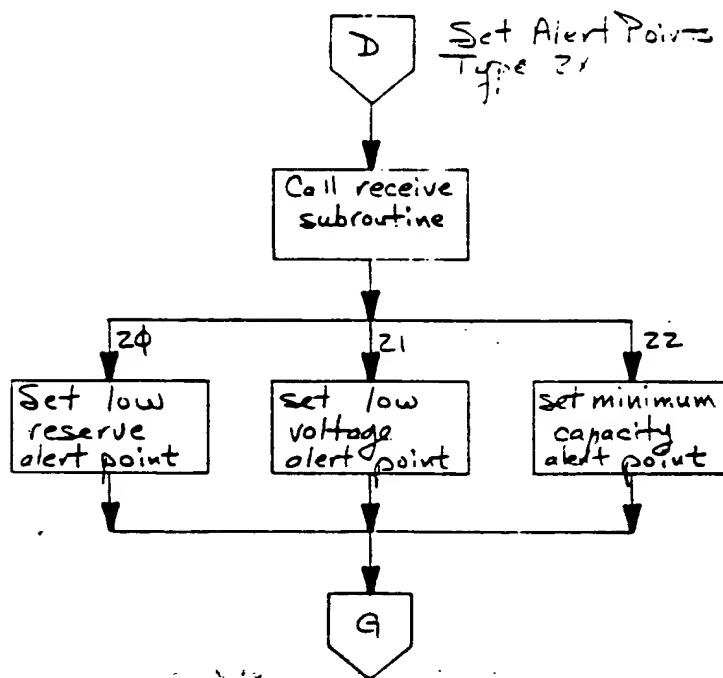
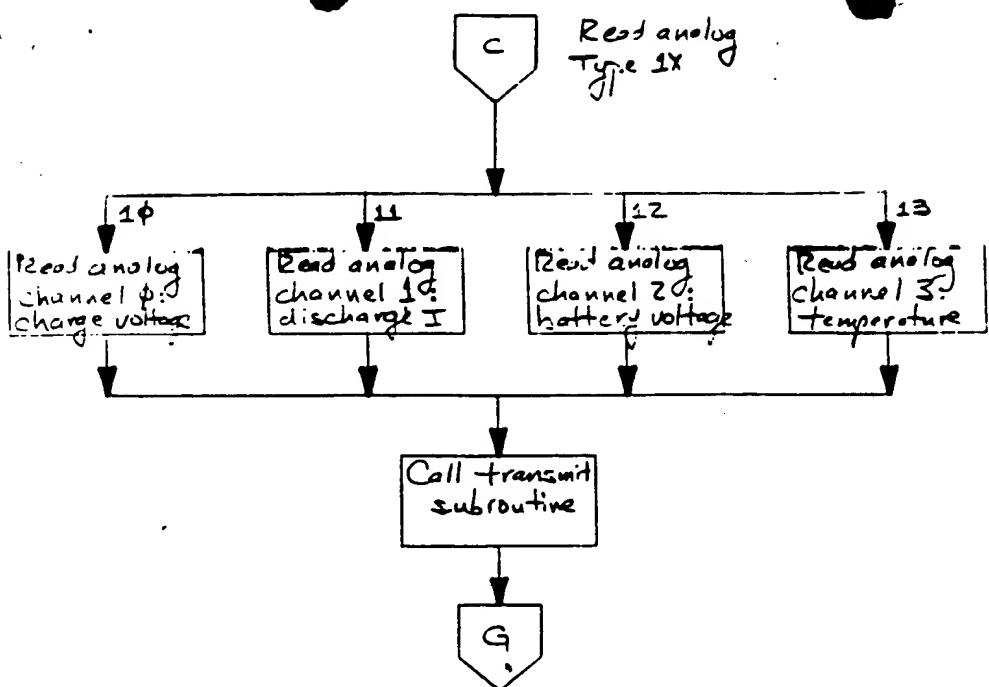


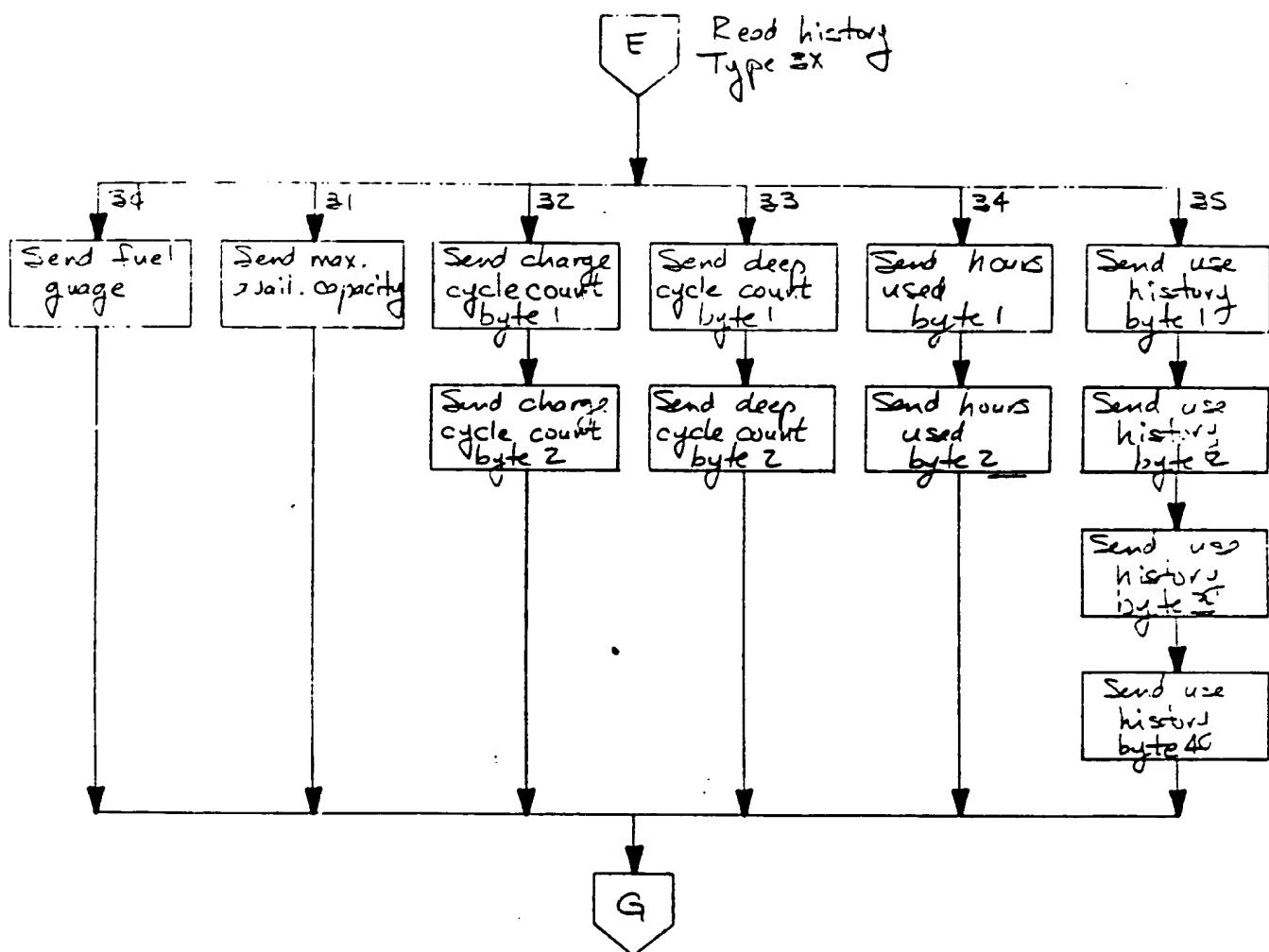
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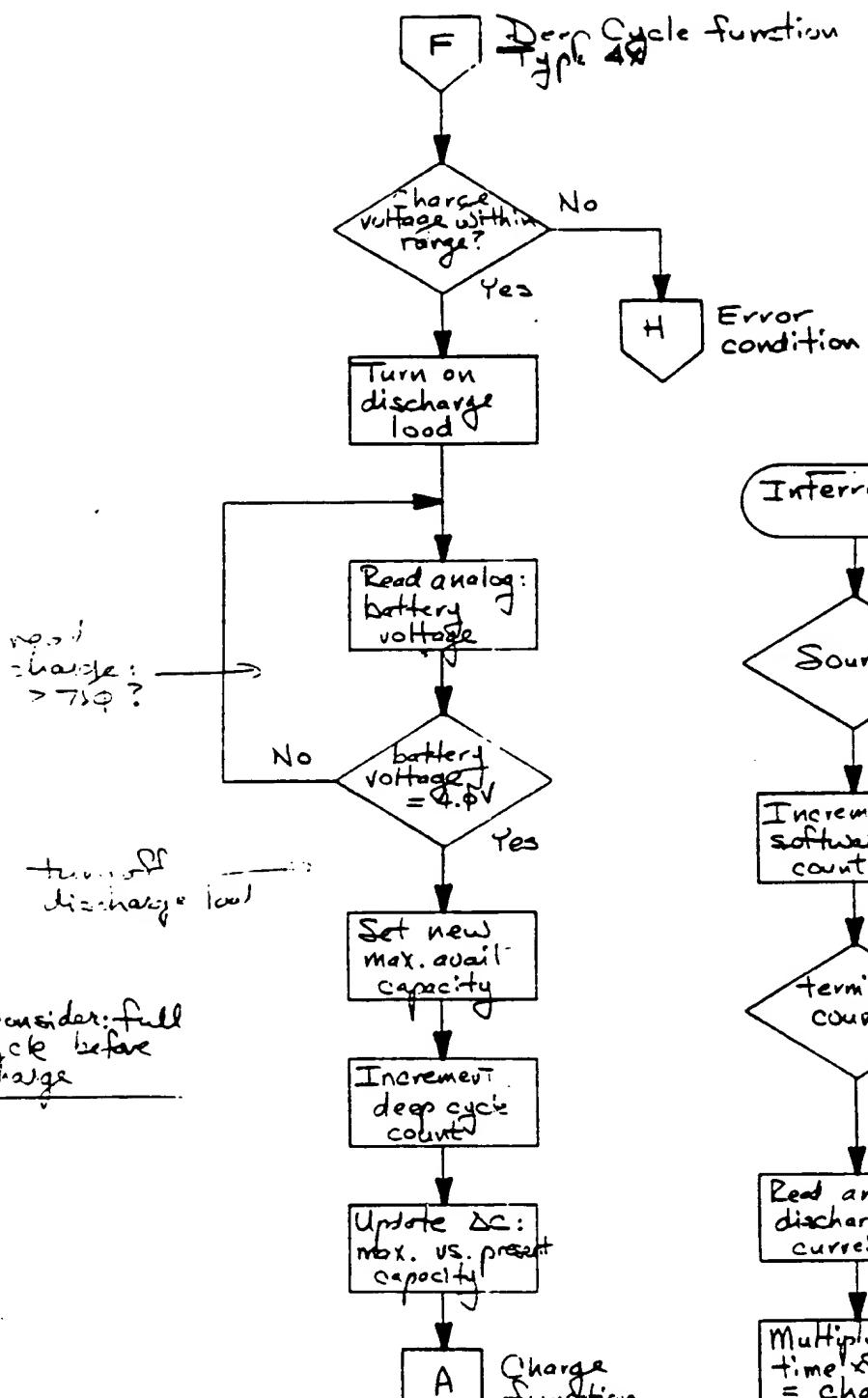
Note: Processor does not enter WAIT condition during charge.



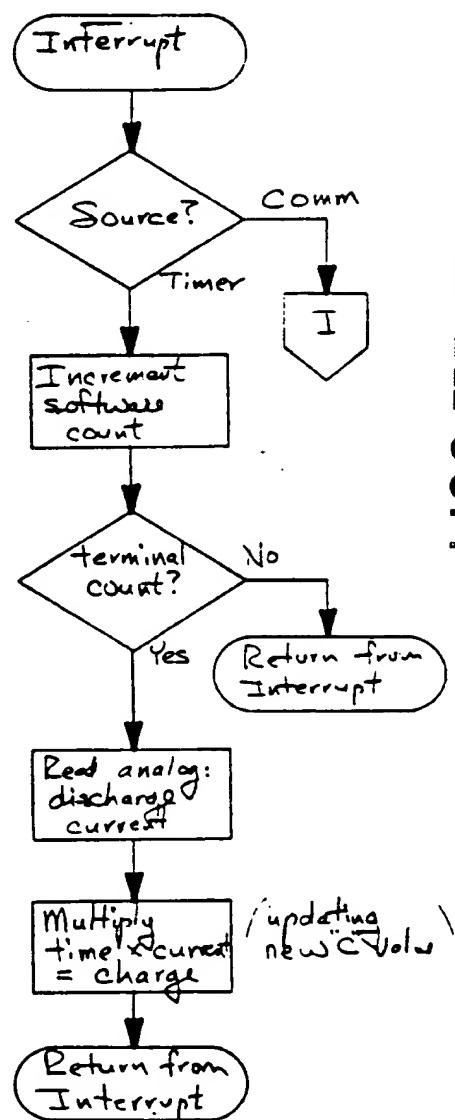


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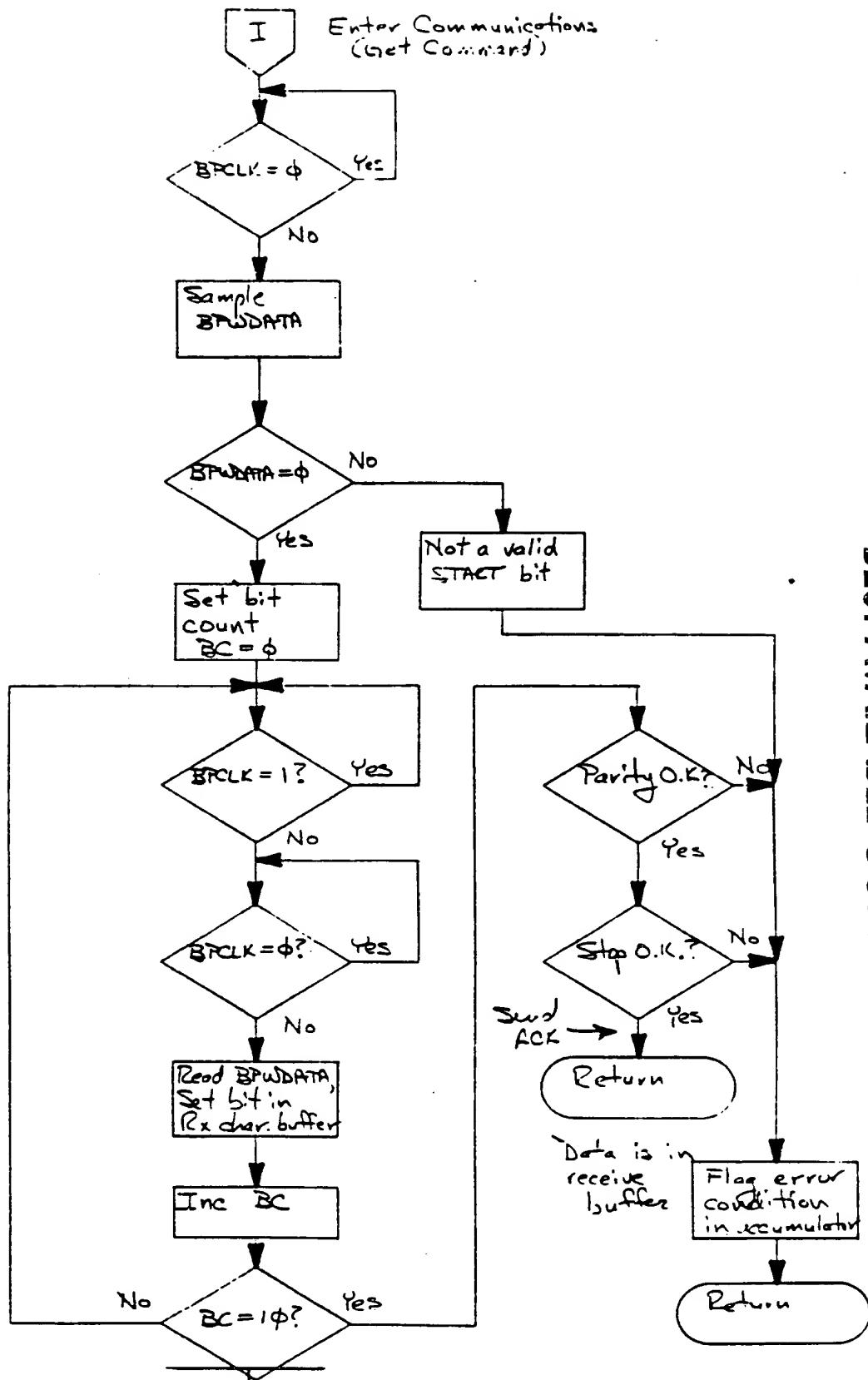
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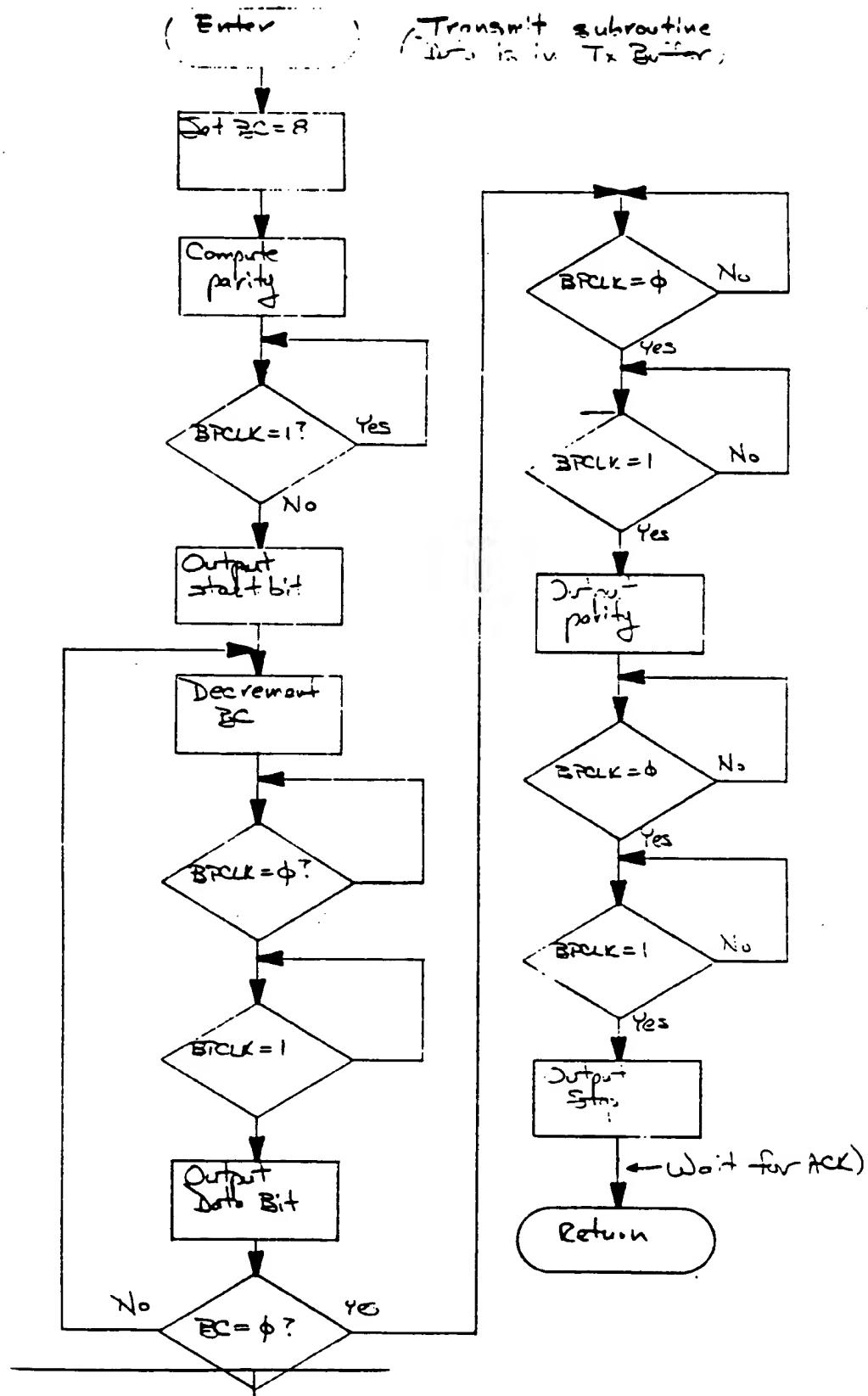


Note: Processor does not enter WAIT condition during deep discharge



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Charge level look up table:

Input variables:

1. Temperature
2. Charge voltage
3. Fuel gauge

1. Temperature : table increments of 4°C \times 16 steps = 64°C , -14°C to $+50^{\circ}\text{C}$
temperatures below -14°C use -14°C value
temperatures above $+50^{\circ}\text{C}$ use $+50^{\circ}\text{C}$ value

2. Charge voltage : table increments of 1.28 volts \times 8 steps = 10.24 Volts
 $7.0 < V_{\text{CHG}} < 17.24 \text{ V.}$

voltages below 7 volts or above 17.24 volts will cause the charge level to be turned off and an error condition to be transmitted to the terminal processor

3. Fuel gauge : 4 steps:

0 - 25%

25 - 50%

50 - 75%

75 - 100%

TABLE OUTPUT: 4 bits, binary weighted
charge level = 32 ma/step
 $0 \leq I_{\text{CHG}} \leq 480 \text{ ma}$

TABLE SIZE:

$$16 \times 8 \times 2 = 256 \text{ Bytes}$$

① ③ ③
Temp Chg voltage %C (4 nibbles)